

CLAIMS

1. A semiconductor memory which is capable of executing at least two application programs, comprising:

a first storage unit operable to store data relating to a first application program;

a second storage unit operable to store data relating to a second application program;

a level identification unit operable to identify respective security levels of the first and second application programs for the data relating to the first and second application programs, based on a criterion for identifying a security level of an application program for data relating to the application program; and

a duplication unit operable to duplicate the data stored in the first storage unit and to store the duplicated data into the second storage unit, without taking the data outside of the semiconductor memory, in the case where a relationship between the two security levels identified by the level identification unit meets a predetermined condition.

2. A semiconductor memory according to Claim 1, further comprising

a comparison unit operable to determine the relationship by comparing the two security levels identified by the level identification unit,

wherein the duplication unit is operable to duplicate the data stored in the first storage unit and to store the duplicated data into the second storage unit, in the case where the relationship determined by the comparison unit meets the predetermined condition.

3. A semiconductor memory according to Claim 1, further comprising

an obtaining unit operable to obtain the relationship determined by comparing the two security levels identified by the level identification unit,

wherein the duplication unit is operable to duplicate the data stored in the first storage unit and to store the duplicated data into the second storage unit, in the case where the relationship obtained by the obtaining unit meets the predetermined condition.

4. A semiconductor memory according to Claim 1,

wherein the security level is a value corresponding to a strength of encryption used by each of the application programs.

5. A semiconductor memory according to Claim 4,

wherein the strength of the encryption is stronger as an algorithm of the encryption is more complex.

6. A semiconductor memory according to Claim 4,

wherein the strength of the encryption is stronger as a bit length of a key for the encryption is longer.

7. A semiconductor memory according to Claim 1,

wherein the security level is a value corresponding to a version number of an application protocol used by each of the application programs.

8. A semiconductor memory according to Claim 1,

wherein the security level is a value corresponding to a version number of each of the application programs.

9. A data duplication method used for a semiconductor memory which is capable of executing at least two application programs, wherein the semiconductor memory includes:

a first storage unit operable to store data relating to a first application program; and

a second storage unit operable to store data relating to a second application program, and

5 the data duplication method comprises:

identifying respective security levels of the first and second application programs for the data relating to the first and second application programs, based on a criterion for identifying a security level of an application program for data relating to the application
10 program; and

duplicating the data stored in the first storage unit and storing the duplicated data into the second storage unit, without taking the data outside of the semiconductor memory, in the case where a relationship between the identified two security levels
15 meets a predetermined condition.

10. A program used for data duplication in a semiconductor memory which is capable of executing at least two application programs,

20 wherein the semiconductor memory includes:

a first storage unit operable to store data relating to a first application program; and

a second storage unit operable to store data relating to a second application program, and

25 the program causes a computer to execute:

identifying respective security levels of the first and second application programs for the data relating to the first and second application programs, based on a criterion for identifying a security level of an application program for data relating to the application
30 program; and

duplicating the data stored in the first storage unit and storing the duplicated data into the second storage unit, without

taking the data outside of the semiconductor memory, in the case where a relationship between the identified two security levels meets a predetermined condition.

5 11. A computer-readable recording medium on which a program used for data duplication in a semiconductor memory is stored, the semiconductor memory being capable of executing at least two application programs,

wherein the semiconductor memory includes:

10 a first storage unit operable to store data relating to a first application program; and

a second storage unit operable to store data relating to a second application program, and

the program causes a computer to execute:

15 identifying respective security levels of the first and second application programs for the data relating to the first and second application programs, based on a criterion for identifying a security level of an application program for data relating to the application program; and

20 duplicating the data stored in the first storage unit and storing the duplicated data into the second storage unit, without taking the data outside of the semiconductor memory, in the case where a relationship between the identified two security levels meets a predetermined condition.

25 12. An integrated circuit for controlling data duplication in a semiconductor memory which is capable of executing at least two application programs,

wherein the semiconductor memory includes:

30 a first storage unit operable to store data relating to a first application program; and

a second storage unit operable to store data relating to a

second application program, and

the integrated circuit comprises:

a level identification unit operable to identify respective security levels of the first and second application programs for the data relating to the first and second application programs, based on
5 a criterion for identifying a security level of an application program for data relating to the application program; and

a duplication unit operable to duplicate the data stored in the first storage unit and to store the duplicated data into the second
10 storage unit, without taking the data outside of the semiconductor memory, in the case where a relationship between the two security levels identified by the level identification unit meets a predetermined condition.